



Preparation of Herbal lotion of Aloe Vera

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ABSTRACT

Aloe Vera, a cactus-like plant belongs to Asphodelaceae (Liliaceae) family has been used for traditional medical purposes for thousands of years. Aloe Vera derives its name from the Arabic word —Alloeh which means —shining bitter substance because of the bitter liquid found in the leaves and Vera which means true in Latin. There are over 300 species of aloe, most of which are native to South Africa, Madagascar and Arabia.

Aloe leaves can be separated into two basic products: the latex, a bitter yellow liquid beneath the epidermis of the leaf and the gel, a colorless and tasteless substance in the inner part of the leaf. Both of them have many biologically active components, mainly anthraquinones and polysaccharides (the most active is acemannan), which may act alone or in synergy. Application of Aloe vera gel is cosmetic-moisturizers, toothpastes and flavoring compounds or preservative of fresh products and in medicine of humans or animals.

Keywords

- ❖ Aloe vera gel.
- ❖ Skin diseases.
- ❖ Medicinal Plant.
- ❖ Wound healing,
- ❖ Anti-inflammatory.
- ❖ pharmacological properties.

INTRODUCTION

The sticky latex liquid is derived from the yellowish green pericyclic tubules that line the leaf (rind); this is the part that yields laxative anthraquinones. There are over 300 species of aloe, most of which are native to South Africa, Madagascar and Arabia . The different species have somewhat different concentrations of active ingredients. Aloe Vera is one of the oldest medicinal plants for healthy skin ever known. This plant is often mentioned used in herbal medicines since the beginning of the first century AD. Aloe Vera (AV) gel has been used in the treatment of wounds, burns, insect stings, and skin inflammation, anti-inflammatory, antiseptic and antimicrobial, anti-tumor, anti- skin protection, ant diabetic, anti-bacterial, anti-viral, and which are very important for wound healing . AV is effective for wound healing through various mechanisms such as maintaining moist wounds, increasing cell migration, increasing collagen production, and reducing inflammation.

Aloe vera to treat wounds such as psoriasis, mouth sores, ulcers, diabetes, herpes, bedsores, and burn wounds. AV is very good at maintaining moisture, tightening, and smoothing the skin. Aloe vera gel is an active ingredient in hundreds of skin lotions, sun blocks and cosmetics. AV gel contains various vitamins such as vitamin B12, vitamin A, other B-group vitamins, vitamin C, vitamin E, folic acid, and 19 of the 20 amino acids needed by the human body. The gel's use in cosmetics has been boosted by claims that it has similar anti-aging effects to vitamin A derivatives

Plan of work:-

- ❖ **Active components with their property**
- ❖ **Mechanism of action**
- ❖ **Therapeutic action**
- ❖ **Benefits**
- ❖ **Materials and methods**
- ❖ **Evaluation parameter**

➤ **To Prepare Aloe Vera lotion by extraction process for better integrity of skin**

Objective :-

- ❖ Aloe vera lotion used as moisturizer for skin
- ❖ reduces acne and skin irritation
- ❖ reduces skin diseases like eczema, Psoriasis, dry skin, Wrinkles, rashes etc
- ❖ increase glow in skin
- ❖ Improve skin integrity

Active components with its properties:-

Vitamins:-

It contains vitamins A ,C and E, which are antioxidants. It also contains vitamin B12, folic acid. Antioxidant neutralizes free radicals.

Others:-

It provides 20 of the 22 human required amino acids and 7 of the 8 essential amino acids. It also contains salicylic acid that possesses anti-inflammatory and antibacterial properties.

Mechanism of actions

❖ **Healing properties:-**

Glucomannan, a mannose-rich polysaccharide, and gibberellin, a growth hormone, interacts with growth factor receptors on the fibroblast, thereby stimulating its activity and proliferation, which in turn significantly increases collagen synthesis after topical and oral Aloe vera. Aloe gel not only increased collagen content of the wound but also changed collagen composition (more type III) and increased the degree of collagen cross linking. Due to this, it accelerated wound contraction and increased the breaking strength of resulting scar tissue.

❖ **Effects on skin exposure to UV and gamma radiation:-**

Aloe vera gel has been reported to have a protective effect against radiation damage to the skin. Exact role is not known, but following the administration of aloe vera gel, an antioxidant protein, metallothionein, is generated in the skin, which scavenges hydroxyl radicals and prevents suppression of superoxide dismutase and glutathione peroxidase in the skin.

❖ **Moisturizing and anti-aging effect:-**

It also has cohesive effects on the superficial flaking epidermal cells by sticking them together, which softens the skin. The amino acids also soften hardened skin cells and zinc acts as an astringent to tighten pores. Its moisturizing effects has also been studied in treatment of dry skin associated with occupational exposure where aloe vera gel gloves improved the skin integrity, decreases appearance of fine wrinkle and decreases erythema. It also has anti-acne effect.

❖ **Antiseptic effect:-**

Aloe vera contains 6 antiseptic agents: Lupeol, salicylic acid, urea nitrogen, cinnamonic acid, phenols and sulfur. They all have inhibitory action on fungi, bacteria and viruses.(2)

❖ **Anti-inflammatory action:-**

Aloe vera inhibits the cyclooxygenase pathway and reduces prostaglandin E2 production from arachidonic acid. Recently, the novel anti-inflammatory compound called C-glucosyl chromone was isolated from gel extracts.



Uses / benefits of Aloe vera gel

- ❖ It is used as base material for the production of creams, lotions, soaps, shampoos, facial cleansers and other products.
- ❖ In the pharmaceutical industry, it is used for the manufacturing of topical products such as ointments and gel preparations, as well as in the production of tablets and capsules dried aloe gel has been successfully used to manufacture directly compressible matrix type tablets.
- ❖ It also provides essential minerals and vitamins.
- ❖ Aloe Vera helps in healing dry skin, fungal infections and excessively oily skin.

THERAPEUTIC ACTIONS OF ALOE VERA

- 1) Effects on skin exposure to UV and gamma radiation:-
- 2) Anti-inflammatory action:-
- 3) Anti bacterial and Anti fungal activities:-
- 4) Moisturizing and anti-aging effect:-
- 5) Antiseptic effect:-
- 6) .Healing properties:-
- 7) Effects on skin exposure to UV and gamma radiation

Formulation table:-

Sr. No.	Ingredient	Quantity
1	Aloe vera gel	15 ml
2	Coconut oil	12 ml
3	Rose water	24ml
4	Vitamin E	2capsule
5	Glycerin	15 ml
6	Agar powder	3.9gm

Table 1 :- formulation table

Preparation before the formulation: -

Clean and sanitize your work area and all you packaging materials. It is suggested that you wear gloves, protective clothing and a hair net while preparing this recipe.

Experimental Work Equipment:-

- Digital balance,
- pH meter ,
- measuring cylinder,
- glass bowl,
- spoon,
- Brooke filed viscometer.

Conclusion :

- Aloe vera is a medicinal plant and curing agent for various diseases such as wound healing, inflammation, microbial disease, skin problems and moisturizing skin and others.
- Aloe vera has acquired great commercial importance for medical products and cosmetics. Aloe vera is widely used in food healthcare, skincare and medical industry as active ingredients for extra therapeutic, health enhance effective.
- Aloe vera improves skin moisture from the texture of roughness, shines, cracks, and scrapes. Aloe vera emulgel formulation due to its anti-inflammatory, ant-acne, anti-oxidant, anti-diabetic non-irritant and deeply turn into normal position with soothing and emollient effects